## REMARKS

Applicants have carefully reviewed this Application in light of the Office Action mailed March 27, 2003. Applicants believe all pending claims, as originally submitted, are allowable over the references cited by the Examiner. Accordingly, Applicants respectfully request reconsideration and favorable action in this case.

### *Claim Rejections—35 U.S.C. § 102(e)*

The Examiner rejected Claims 1, 5, and 12 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,275,499, issued to Wynn et al. (*"Wynn"*). *Wynn* does not disclose, teach, or suggest Applicants' claimed invention as recited in Claims 1, 5, and 12.

### Independent Claim 1 and Dependent Claim 5

Independent Claim 1 recites:

> A communications device, comprising:
> a backplane;
> a plurality of backplane cards coupled to the backplane, each backplane card assigned a standard-based network address; and
> a backplane switch coupled to the backplane and operable to receive a first data packet with a first network address assigned to a backplane card and to communicate the first data packet to the backplane card using the backplane.

*Wynn* does not disclose, teach, or suggest "a plurality of backplane cards coupled to the backplane, each backplane card assigned a standard-based network address," as recited in Claim 1. Wynn mentions control messages communicated by iPL subframes that include "a header whose destination addresses determine the card or cards that receive iPL subframes." (Col. 9, ll. 9-10). Wynn, however, does not specify that the destination address is a "standard-based network address," as recited in Claim 1. According to Applicants' specification, a data network address is assigned according to a network protocol, which is "a set of rules that computers or other processing devices use to communicate over a local-area network (LAN), wide-area network (WAN), the Internet, or any other data network environment." (p. 8, ll. 6-11).

*Wynn* does not specify that the destination address mentioned in its specification is a network address that could be used to communicate over a LAN, WAN, the Internet, or any other

data network environment. To the contrary, *Wynn* indicates that it uses different types of transport for internal communications within delivery unit 10 and external communications outside of delivery unit 10.

> Delivery unit 10 uses *two basic types of internal transport*, referred to herein as the "STS-1P transport" and the "SBB-LS transport". A *third type of transport* is used between MTXI 105 and switching matrix 11a, and is discussed below in the section entitled "Network Data Transport; MTXI Transport."

(Col. 8, ll. 54-59) (emphasis added). Figure 1 and the accompanying text describing bus control module (BCM) 101 further indicate that the network transport protocol used for internal communications among application cards 102-106 is not a "standard-based network protocol" that may be used to communicate externally over a local-area network (LAN), wide-area network (WAN), the Internet, or any other data network environment:

> For SBB-LS transport, BCM 101 multiplexes ingress bus signals to an egress bus frame. The egress bus is fanned out for transmission (broadcast) to application card 102-106. All application cards 102-106 have access to all subframes generated by all cards via the broadcast nature of the egress bus. Bus interface circuits at each card select STM subframes containing network data (DS0 channels) to be processed by that card. For control messages, each iPL subframe contains a control data payload (for internal control, administration, and maintenance messages) and a header whose destination addresses determine the card or cards that receive iPL subframes.

(Col. 8, l. 66 – col. 9, ll. 10). Because the SBB-LS transport discussed in *Wynn* is used only to transport data internally among application cards 102-106, it is not a network protocol used to communicate over a local-area network (LAN), wide-area network (WAN), the Internet, or any other data network environment. As a result, the destination addresses discussed in *Wynn* are not are a "standard-based network address," as recited in Claim 1. For at least this reason, independent Claim 1 is patentable over *Wynn*. Accordingly, Applicants respectfully request reconsideration and the allowance of Claim 1, together with those claims that depend from Claim 1.

Dependent claim 5 is patentable because, at a minimum, *Wynn* does not disclose, teach, or suggest the limitations of base Claim 1. In addition, Claim 5 is patentable because *Wynn* does not disclose, teach, or suggest a backplane bus "providing a dedicated bandwidth between a

backplane card and the backplane switch," as recited in claim 5. The Examiner relies on *Wynn's* mention of OC3 for this limitation. *Wynn*, however, does not indicate that OC3 is used to provide dedicate bandwidth in a backplane between a backplane switch and a backplane card. Rather, *Wynn* mentions OC3 in the context of external communications. (Col. 2, ll. 6-8) ("[T]he unit controller will perform all the function required for line/trunk processing for a shelf of an OC3 delivery unit."). For at least these reasons, dependent Claim 5 is patentable over *Wynn*. Accordingly, Applicants respectfully request reconsideration and the allowance of dependent Claim 5.

### Independent Claim 12

Independent Claim 12 recites:

> A method of communicating data packets using a plurality of backplane cards coupled to a backplane of a communications device, the method comprising:
> assigning a standard-based network address to each backplane card;
> receiving at a backplane switch a first data packet with a first network address assigned to a backplane card; and
> communicating the first data packet from the backplane switch to the backplane card using the backplane.

*Wynn* does not disclose, teach, or suggest "assigning a standard-based network address to each backplane card," as recited in Claim 12. As explained above with reference to independent Claim 1, *Wynn* does not specify that the destination address mentioned in its specification is a network address – i.e., a type of address that could be used to communicate over a LAN, WAN, the Internet, or any other data network environment. To the contrary, *Wynn* indicates that it uses different types of transport for internal communications among the cards within delivery unit 10 and external communications between MTXI 105 and switching matrix 11a. (Col. 8, ll. 54-59). For at least this reason, independent Claim 12 is patentable over *Wynn*. Accordingly, Applicants respectfully request reconsideration and the allowance of Claim 12, together with those claims that depend from Claim 12.

*Claim Rejections—35 U.S.C. § 103(a)*

The Examiner rejected Claims 2-4, 13-16, 23-27, 33-36, 43-46, and 53-57 under

35 U.S.C. § 103(a) as being unpatentable over *Wynn* in view of U.S. Patent 6,216,167 issued to

Bare ("*Bare*"). *Wynn* and *Bare* do not disclose, teach, or suggest Applicants' claimed invention

as recited in Claims 2-4, 13-16, 23-27, 33-36, 43-46, and 53-57.

## Independent Claim 23

Independent Claim 23 recites:

> A backplane card assigned a first network address and coupled to a backplane within a communications device, the card comprising:
> an internal interface coupled to a backplane bus;
> a communication module operable to receive a first data packet from the backplane bus using the internal interface if the first data packet's destination address corresponds to the first network address, the communication module further operable to communicate a second data packet to another backplane card by associating the second data packet with a second network address assigned to the other backplane card and communicating the second data packet to the backplane bus using the internal interface.

*Wynn* and *Bare* do not disclose, teach, or suggest a backplane card "assigned a first

network address," and "a communication module operable to receive a first data packet from the

backplane bus using the internal interface if the first data packet's destination address

corresponds to the first network address" and "further operable to communicate a second data

packet to another backplane card by associating the second data packet with a second network

address assigned to the other backplane card and communicating the second data packet to the

backplane bus using the internal interface," as recited in Claim 23. As explained above with

reference to independent Claim 1, *Wynn* does not specify that the destination address mentioned

in its specification is a network address—i.e., a type of address that could be used to

communicate over a LAN, WAN, the Internet, or any other data network environment. To the

contrary, *Wynn* indicates that it uses different types of transport for internal communications

within delivery unit 10 and external communications between MTXI 105 and switching matrix

11a. (Col. 8, ll. 54-59). While *Bare* mentions network protocols and addresses (in particular,

Ethernet), *Bare* discusses the protocols and addresses in the context of *external* communications

in a network of computing or communicating devices. (Col. 1, ll. 35 – col. 2, l. 43). *Bare*, however, does not disclose, teach, or suggest using these protocols or addresses to communicate data *internally* within a computing or communicating device. For at least these reasons, independent Claim 23 is patentable over *Wynn* and *Bare*. Accordingly, Applicants respectfully request reconsideration and the allowance of Claim 23, together with those claims that depend from Claim 23.

### Independent Claim 33

Independent Claim 33 recites:

> A communications system, comprising:
> a plurality of network devices, each network device assigned a network address;
> a communications device, comprising:
> a plurality of backplane cards coupled to a backplane, each backplane card assigned a network address; and
> a backplane switch coupled to the backplane and the network devices, the backplane switch operable to receive a first data packet with a first network address assigned to a network device and, in response, to communicate the first data packet to the network device, the backplane switch further operable to receive a second data packet with a second network address assigned to a backplane card and, in response, to communicate the second data packet to the backplane card using the backplane; and
> wherein the network devices are external to the communications device.

*Wynn* and *Bare* do not disclose, teach, or suggest "a plurality of backplane cards coupled to a backplane, each backplane card assigned a network address," as recited in Claim 33. As explained above with reference to independent Claim 1, *Wynn* does not specify that the destination address mentioned in its specification is a "network address" – i.e., a type of address that could be used to communicate over a LAN, WAN, the Internet, or any other data network environment. To the contrary, *Wynn* indicates that it uses different types of transport for internal communications among the cards within delivery unit 10 and external communications between MTXI 105 and switching matrix 11a. (Col. 8, ll. 54-59). While *Bare* mentions network protocols and addresses (in particular, Ethernet), *Bare* discusses the protocols and addresses in the context of *external* communications in a network of computing or communicating devices. (Col. 1, ll. 35 – col. 2, l. 43). *Bare*, however, does not disclose, teach, or suggest using these

protocols or addresses to communicate data *internally within a computing* or communicating device.

In addition, *Wynn* and *Bare* do not disclose, teach, or suggest "a backplane switch . . . operable to receive a first data packet with a first network address assigned to a network device and, in response, to communicate the first data packet to the network device, the backplane switch further operable to receive a second data packet with a second network address assigned to a backplane card and, in response, to communicate the second data packet to the backplane card using the backplane." Neither *Wynn* nor *Bare* disclose, teach, or suggest a backplane switch that can communicate a data packet to either a backplane card or an external network device according to the packet's assigned network address. The Examiner acknowledges that *Wynn* does not disclose this claimed feature and, thus, relies on *Bare* for the missing limitation. However, while *Bare* discusses externally communicating data packets among computing or communicating devices in a network (Col. 1, ll. 35 – col. 2, l. 43), *Bare* does not does disclose, teach, or suggest a backplane switch that can communicate a data packet to either an internal backplane card or an external network device according to the packet's assigned network address.

For at least these reasons, independent Claim 33 is patentable over *Wynn* and *Bare*. Accordingly, Applicants respectfully request reconsideration and the allowance of Claim 33, together with those claims that depend from Claim 33.

### Independent Claim 43

Independent Claim 43 recites:

> A method of communicating data using a communications device, the communications device including a backplane coupled to a backplane switch and a plurality of backplane cards, the backplane switch coupled to at least one network device external to the communications device, the method comprising:
>
> assigning a network address to each backplane card and the external network device;
>
> receiving, at the backplane switch, data associated with a network address;
>
> communicating the data from the backplane switch to the external network device if the associated network address is assigned to the network device; and
>
> communicating the data from the backplane switch to a backplane card using the backplane if the associated network address is assigned to the backplane card.

*Wynn* and *Bare* do not disclose, teach, or suggest "assigning a network address to each backplane card," as recited in Claim 43. As explained above with reference to independent Claim 1, *Wynn* does not specify that the destination address mentioned in its specification is a "network address"—i.e., a type of address that could be used to communicate over a LAN, WAN, the Internet, or any other data network environment. To the contrary, *Wynn* indicates that it uses different types of transport for internal communications among the cards within delivery unit 10 and external communications between MTXI 105 and switching matrix 11a. (Col. 8, ll. 54-59). While *Bare* mentions network protocols and addresses (in particular, Ethernet), *Bare* discusses the protocols and addresses in the context of *external* communications in a network of computing or communicating devices. (Col. 1, ll. 35 – col. 2, l. 43). *Bare*, however, does not disclose, teach, or suggest using these protocols or addresses to communicate data *internally* within a computing or communicating device.

In addition, *Wynn* and *Bare* do not disclose, teach, or suggest "communicating the data from the backplane switch to the external network device if the associated network address is assigned to the network device" and "communicating the data from the backplane switch to a backplane card using the backplane if the associated network address is assigned to the backplane card," as recited in Claim 43. Neither *Wynn* nor *Bare* disclose, teach, or suggest a backplane switch that can communicate a data packet to either a backplane card or an external network device according to the packet's assigned network address. The Examiner acknowledges that *Wynn* does not disclose this claimed feature and, thus, relies on *Bare* for the missing limitation. However, while *Bare* discusses externally communicating data packets among computing or communicating devices in a network (Col. 1, ll. 35 – col. 2, l. 43), *Bare* does not does disclose, teach, or suggest a backplane switch that can communicate a data packet to either an internal backplane card or an external network device according to the packet's assigned network address.

For at least these reasons, independent Claim 43 is patentable over *Wynn* and *Bare*. Accordingly, Applicants respectfully request reconsideration and the allowance of Claim 43, together with those claims that depend from Claim 43.

## Independent Claim 53

Independent Claim 53 recites:

> A backplane switch coupled to a backplane of a communications device, the communications device having a plurality of backplane cards coupled to the backplane, the backplane switch comprising:
>
> a plurality of internal ports, each internal port associated with a backplane card and operable to communicate with the associated backplane card using the backplane;
>
> at least one external port associated with a network device external to the communications device and operable to communicate with the external network device; and
>
> a processing module coupled to the internal ports and the external port, the processing module operable to receive a first data packet with a first network address assigned to the network device, to identify the external port associated with the network device, and to communicate the first data packet to the external port for communication to the network device, the processing module further operable to receive a second data packet with a second network address assigned to a backplane card, to identify an internal port associated with the backplane card, and to communicate the second data packet to the identified internal port for communication to the backplane card.

*Wynn* does not disclose, teach, or suggest "the processing module operable to receive a first data packet with a first network address assigned to the network device, to identify the external port associated with the network device, and to communicate the first data packet to the external port for communication to the network device, the processing module further operable to receive a second data packet with a second network address assigned to a backplane card, to identify an internal port associated with the backplane card, and to communicate the second data packet to the identified internal port for communication to the backplane card," as recited in Claim 53. Neither *Wynn* nor *Bare* disclose, teach, or suggest a backplane switch that can communicate a data packet to either a backplane card or an external network device according to the packet's assigned network address. The Examiner acknowledges that *Wynn* does not disclose this claimed feature and, thus, relies on *Bare* for the missing limitation. However, while *Bare* discusses externally communicating data packets among computing or communicating devices in a network (Col. 1, ll. 35 – col. 2, l. 43), *Bare* does not does disclose, teach, or suggest a backplane switch that can communicate a data packet to either an internal backplane card or

an external network device according to the packet's assigned network address. For at least these reasons, independent Claim 53 is patentable over *Wynn*. Accordingly, Applicants respectfully request reconsideration and the allowance of Claim 53, together with those claims that depend from Claim 53.

### Dependent Claims 24, 34, 44, and 54

Dependent Claims 24, 34, 44, and 54 are patentable because, at a minimum, *Wynn* and *Bare* do not disclose, teach, or suggest the limitations of their respective base Claims 23, 33, 43, and 53.

In addition, Claims 24, 34, 44, and 54 are patentable because *Wynn* and *Bare* do not disclose, teach, or suggest the additional limitations recited in Claims 24, 34, 43, and 53. Claims 24, 34, and 43, and 53 require that the network addresses recited in their respective base Claims 23, 33, 44, and 54 be "standard-based network addresses." The Examiner takes official notice "that it is well known feature of a network card to have a standardized network address associated with its identity, as a MAC address is a standardized network address identifier for any Ethernet network card, a commonly known and abundant type of network card." (p. 4). While network cards, such as Ethernet cards, are typically assigned standardized network addresses identifiers for external communications, Applicants respectfully submit that it was not known to use standard-based network addresses for internal communications as required by dependent Claims 24, 34, 44, and 54, when read in context with their respective base Claims 23, 33, 43, and 53. For this additional reason, dependent Claims 24, 34, 44, and 54 are patentable over *Wynn* and *Bare*. Accordingly Applicants respectfully request reconsideration and the allowance of Claims 24, 34, 44, and 54.

### Dependent Claims 2, 13, 25, 35, 45, and 55

Dependent claims 2, 13, 25, 35, 45, and 55 are patentable because, at a minimum, *Wynn* and *Bare* do not disclose, teach, or suggest the limitations of their respective base Claims 1, 12, 23, 33, 43, and 53.

In addition, Claims 2, 13, 25, 35, 45, and 55 are patentable because *Wynn* and *Bare* do not disclose, teach, or suggest the additional limitations recited in Claims 2, 13, 25, 35, 45, and 55.

- Claims 2 and 13 further require that the standard-based network address assigned each backplane card is a "Media Access Control (MAC) address" and that a data packet is communicated from the backplane switch to the backplane card "according to an Ethernet protocol."

- Claim 25 requires that the first and second network addresses assigned the backplane cards are "Media Access Control (MAC) addresses" and that "the communication module receives the first data packet from the backplane bus and communicates the second data packet to the backplane bus according to an Ethernet protocol."

- Claim 35 requires that the network addresses assigned to the network devices and backplane cards are "Media Access Control (MAC) addresses" and that "the backplane switch communicates data packets to the network devices and backplane cards according to an Ethernet protocol."

- Claim 45 requires "the network address assigned to each backplane card and the external network device is a Media Access Control (MAC) address."

- Claim 55 requires that  the first and second network addresses assigned to the network device and the backplane card are "Media Access Control (MAC) addresses" and that "each internal port communicates data packets to the associated backplane card according to an Ethernet protocol."

The Examiner finds that *Wynn* does not teach these additional limitations of Claims 2, 13, 25, 35, 45, and 55, but based on *Bare*, the Examiner concludes that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the use of an Ethernet standard and MAC addresses to conform to one of the most common standards in LAN for the devices of the applicant's invention to more readily communicate with Ethernet devices *external to its existing structure*." (p. 5) (emphasis added).  As recognized by the Examiner, *Bare* teaches the use of Ethernet for *external* communications in a network of computing or communicating devices.  (Col. 1, ll. 35 – col. 2, l. 43).  *Bare*, however, does not disclose, teach, or suggest using MAC addresses or Ethernet to communicate data *internally* within a computing or communicating devices.  Thus, neither *Wynn* nor *Bare* disclose, teach, or suggest the additional limitations of dependent Claims 2, 13, 25, 35, 45, and 55 which require the use of MAC addresses and Ethernet for internal communications to a backplane card.  For this additional reason, dependent Claims 2, 13, 25, 35, 45, and 55  are patentable over *Wynn* and *Bare*.  Accordingly Applicants respectfully request reconsideration and the allowance of Claims 2, 13, 25, 35, 45, and 55.

### Dependent Claims 16, 26, 36, 46, and 56

Dependent claims 16, 26, 36, 46, and 56 are patentable because, at a minimum, *Wynn* and *Bare* do not disclose, teach, or suggest the limitations of their respective base Claims 12, 23, 33, 43, and 53.

In addition, Claims 16, 26, 36, 46, and 56 are patentable because *Wynn* and *Bare* do not disclose, teach, or suggest the additional limitations recited in Claims 16, 26, 36, 46, and 56. Claims 16, 26, 36, 46, and 56 require a dedicated bandwidth between a backplane switch and a backplane card. The Examiner relies on *Wynn's* mention of OC3 to teach this limitation. *Wynn*, however, does not indicate that OC3 is used to provide dedicate bandwidth in a backplane between a backplane switch and a backplane card. Rather, *Wynn* mentions OC3 in the context of external communications. (Col. 2, ll. 6-8) ("[T]he unit controller will perform all the function required for line/trunk processing for a shelf of an OC3 delivery unit."). For this additional reason, dependent Claims 16, 26, 36, 46, and 56 are patentable over *Wynn* and *Bare*. Accordingly Applicants respectfully request reconsideration and the allowance of Claims 16, 26, 36, 46, and 56..

### Dependent Claims 4, 15, 27, and 57

Dependent Claims 4, 15, 27, and 57 are patentable because, at a minimum, *Wynn* and *Bare* do not disclose, teach, or suggest the limitations of their respective base Claims 1, 12, 23, and 53. Accordingly Applicants respectfully request reconsideration and the allowance of Claims 4, 15, 27, and 57.

### Dependent Claims 3 and 14

The Examiner does not specifically address dependent Claims 3 and 14. Dependent claims 3 and 14 are patentable because, at a minimum, *Wynn* and *Bare* do not disclose, teach, or suggest the limitations of their respective base Claims 1 and 12. In addition, as discussed above, neither *Wynn* nor *Bare* disclose, teach, or suggest a backplane switch that can communicate a data packet to either a backplane card or an external network device according to the packet's assigned network address. For these reasons, dependent Claims 3 and 14 are patentable over *Wynn* and *Bare*. Accordingly Applicants respectfully request reconsideration and the allowance of Claims 3 and 14.

*Claim Rejections—35 U.S.C. § 103(a)*

The Examiner rejects Claims 6-8, 10, 17-19, 21, 28-29, 31, 37-39, 41, 47-49, 51, and 58 under 35 U.S.C. § 103(a) as being unpatentable over *Wynn*, in view of *Bare* and further in view of U.S. Patent 6,157,649 issued to Peirce ("*Peirce*").

The Examiner rejects Claims 9 and 20 under 35 U.S.C. § 103(a) as being unpatentable over *Wynn*, in view of U.S. Patent 6,205,149 issued to Lemaire ("*Lemaire*").

The Examiner rejects Claims 30, 40, and 50 under 35 U.S.C. § 103(a) as being unpatentable over *Wynn*, in view of *Bare* and in further view of *Lemaire*.

The Examiner rejects Claims 11 and 22 under 35 U.S.C. § 103(a) as being unpatentable over *Wynn*, in view of U.S. Patent 6,426,952 issued to Francis ("*Francis*").

The Examiner rejects Claims 32, 42, 52, and 59 under 35 U.S.C. § 103(a) as being unpatentable over *Wynn*, in view of *Bare* and in further view of *Francis*.

*Bare, Peirce, Lemaire,* and *Fancis* fail to disclose the limitations of independent Claims 1, 12, 23, 33, 43, and 53 that, as discussed above, are missing from *Wynn*. As a result, because dependent Claims 6-11, 17-22, 28-32, 37-42, 47-52, and 58-59 include the limitations from their base Claims 1, 12, 23, 33, 43, and 53, dependent claims 4, 6-11, 17-22, 28-32, 37-42, 47-52, and 58-59 are patentable over the Examiner's proposed combinations.

## CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. In light of the Remarks set forth above, Applicants respectfully request further examination and full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, Applicants invite the Examiner to contact the undersigned attorney at the Examiner's convenience at (214) 953-6791.

Applicants enclose a check for $110.00 to cover the cost of filing a one-month extension of time. Although Applicants believe that other fees are due, Applicants authorize the Commissioner to charge any additional fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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